



July 21, 2000

Harry Weerts  
John Womersley  
MS 357

Dear Harry and John,

Thank you for the document describing your initial plans for Run IIb, which was distributed to the Physics Advisory Committee (PAC). The Committee had the following comments:

*The CDF and D0 collaborations have begun to develop plans for the replacement of radiation-damaged silicon detectors and other upgrades to ensure effective operation during the high-luminosity Tevatron Run IIb. The Committee welcomes these efforts, and looks forward to presentations of the detailed plans at the fall meeting.*

*Achieving the physics goals of the Tevatron collider program before LHC turn-on is the Laboratory's highest priority. Careful planning and oversight of the detector upgrade projects, and close coordination of these with accelerator upgrade projects, will be essential for success. It is therefore imperative that the scope of the upgrades be defined very soon, that the plans require limited R&D with realistic goals, and that the necessary downtime for installation and commissioning be minimized.*

*The Laboratory presented the Committee with the following set of proposed boundary conditions for the CDF and D0 Run IIb upgrade projects:*

- 1. The budgets for replacement of silicon vertex detectors should be limited to \$2.5 million per experiment, with contingency.*
- 2. The new detectors must be designed with the confidence that they will operate effectively throughout Run IIb, with anticipated integrated luminosity of at least  $15 \text{ fb}^{-1}$ .*
- 3. Installation of all detector upgrades must occur during a single shutdown of no more than six months' duration, with roll-out and roll-in tentatively scheduled between October 2003 and March 2004.*

*The Committee generally endorses these guidelines, but did not have enough time or discussion to determine how realistic the proposed \$2.5 million ceiling is. The Committee encourages the Laboratory to work closely with the collaborations to develop milestones and to identify appropriate fall-backs and descoping options if any of these objectives appears to be in jeopardy.*

We are all aware that everyone's major focus right now is preparation for Run II, however, we must still plan for the future. Over the next few months, you should work with the Directorate to better define your goals and subsequent necessary upgrades for Run IIb. As you may be aware, the Particle Physics Division is conducting an evaluation of the demand for and available resources of the SiDet facility over the next several years. You should participate in this evaluation, which is to be completed by the end of September. As noted above, the PAC would like to hear a presentation of these more detailed plans at the fall meeting, which will be held November 3-5.

Sincerely,



Michael Witherell

cc: K. Stanfield  
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